Completed Pollution Prevention Project Case Study

United States Department of Energy
Office of Environmental Management
Fact Sheet

Circuit Boards Recycled as Scrap Metal

Los Alamos National Laboratory

Original Problem

Circuit boards without nickel-cadmium batteries or mercury switches are normally handled as hazardous waste. When the circuit boards come from equipment inside radiological control areas, the boards are treated as mixed low level waste. The radiation instrument calibration lab used to be one of the largest generators of this mixed low level waste stream at LANL.

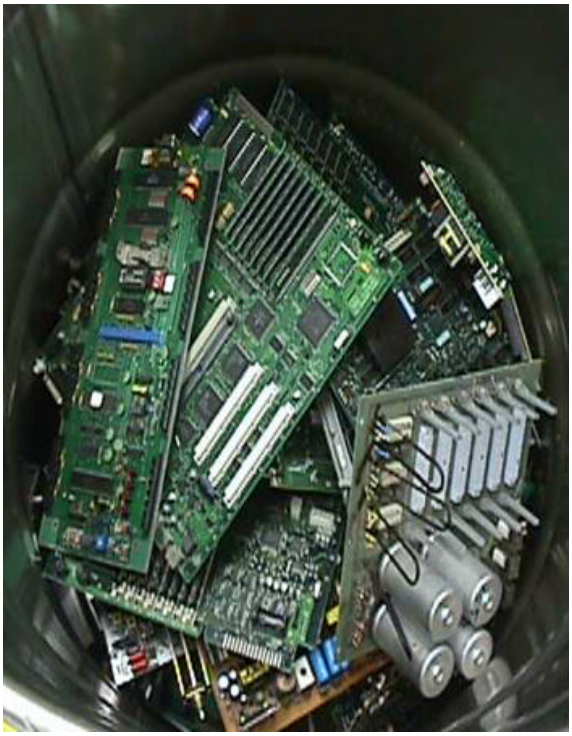
The Project Solution

Since the circuit boards are almost always completely encased inside equipment, there has been no radioactive contamination found on the circuit boards themselves. After the circuit boards are scanned for contamination, they have all data erased from them. The clean circuit boards are sent to a metal recycling facility that can reclaim the precious metals.

Value of Improvement

So far over 140 cubic feet of circuit boards, including 125 cubic feet from legacy instruments, have been cleaned and recycled, saving over $220,000 in waste treatment fees. Precious metals that would have been sent away as waste in the past are now recovered for reuse.

Lifecycle Waste Reduction	
Lifecycle Waste Reduction	>140 cubic ft. MLLW so far
Commencement Date	1999
Project Useful Life (Years)	Indefinite



DOE Monetary Benefits	
Total Project Cost	NA
Lifecycle Savings	>$220,000 to date
Return on Investment	NA

Benefits At-A-Glance

- The project has so far prevented the generation of 140 cubic feet of mixed low level waste.
- The project has saved LANL over $220,000 in waste disposal fees to date.
- Precious metals are recovered for reuse by a metal recycler.

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Summary Data	
Priority Area:	Waste Minimization Projects
Project Type:	Recycling
Total Project Cost:	NA
Lifecycle Savings:	>$220,000 to date
Implementing Group:	FWO-SWO / ESH-4
Benefiting Group:	ESH-4
Useful Life Years:	Indefinite
Return on Investment:	NA
Lifecycle Waste Reduction:	>140 cubic feet of mixed low level waste to date
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